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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,910	11/19/2003	Goichi Katayama	FS.20119US0A	7041

20995 7590 04/18/2005

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EXAMINER

RIDDLE, KYLE M

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/716,910

Applicant(s)

KATAYAMA, GOICHI

Examiner

Kyle M. Riddle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11192003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings filed on 19 November 2003 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftsperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:
 - Page 3, paragraph 10, line 3 of the paragraph, "eleven" should read --ten--;
 - Page 24, line 2, "repairperson" should read --repair person--;
 - Page 28, paragraph 122, line 9 of the paragraph, "may" should read --may be--;
 - Page 30, paragraph 128, line 2 of the paragraph, "spends" should read --speeds--;
 - Page 31, paragraph 132, line 3 of the paragraph, "36" should read --366--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 7-10, 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Buckland et al. (U.S. Patent 6,349,700).

Re claims 1, 2, 7, 9, 10, 14, and 16, Buckland et al. disclose an engine/vehicle speed control comprising a system 10 for an internal combustion engine having corresponding combustion chambers 14 with intake/exhaust valves 16, 18 and ports (column 3, lines 12-25) for use in unthrottled or throttleless engines (column 3, lines 62-65) or throttled engines (column 3, lines 65-67 with column 4, lines 1-8, column 4, lines 46-47), a throttle valve 40 used to modulate the airflow through intake 34 via intake manifold (column 3, lines 48-55), an exhaust manifold to exhaust the combusted air/fuel mixture via exhaust valve 18 control (column 4, lines 59-61), variable valve timing actuators for the intake/exhaust valves 16, 18 (column 3, lines 20-26), a controller 22 configured to control the variable valve timing based on various sensor signals and engine/vehicle operating parameters (column 3, lines 40-43, lines 50-61, column 4, lines 13-21), the controller able to determine if the engine is in a cruising speed mode based on driver inputs and/or current engine operating conditions and/or current vehicle operating conditions (column 5, lines 55-60, column 14, lines 16-23, column 15, lines 7-10), and controlling the intake and exhaust valve timing to reduce load disturbances (column 4, lines 42-48, column 14, lines 20-23, column 16, lines 30-33).

Re claims 8, 15, and 17, Buckland et al. disclose variable valve timing mechanisms for intake valves 16 and exhaust valves 18 to include variable cam timing or conventional camshaft arrangements (column 4, lines 17-23).

5. Claims 1, 7, 9, 14, and 16 are further rejected under 35 U.S.C. 102(e) as being anticipated by Mianzo et al. (U.S. Patent 6,554,091).

Mianzo et al. disclose an internal combustion engine 10 with a plurality of combustion chambers 14, associated intake 16 with intake manifold 24 and exhaust 18, intake valves 20 and

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exhaust valves 22 with respective ports, a variable valve timing arrangement controlled using electromagnetic actuators, an engine controller 12 (column 3, lines 20-30), a mass airflow sensor 36 and engine speed sensor 37 determining an operating condition of engine 10, the controller 12 modifying the valve timing to control airflow (column 3, lines 51-60), a speed control system 62 controlled by controller 12 to maintain the vehicle at a constant desired speed (column 4, lines 36-40), the engine speed controller changing the valve timing based on engine speed (column 6, lines 60-67 with column 7, line 1), the speed control system permitting vehicle operation at a constant speed by varying valve timing (abstract, column 2, lines 21-34, lines 43-59, column 10, lines 24-34, line 67 with column 11, lines 1-23).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-6, 11-13 are rejected under 35 U.S.C. 103(a) as being obvious over Buckland et al.

Buckland et al. disclose an engine/vehicle speed control comprising a system for an internal combustion engine having corresponding combustion chambers with intake/exhaust valves and ports for use in unthrottled or throttleless engines or throttled engines, a throttle valve used to modulate the airflow through intake via intake manifold, an exhaust manifold to exhaust the combusted air/fuel mixture via exhaust valve control, variable valve timing actuators for the intake/exhaust valves, a controller configured to control the variable valve timing based on

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various sensor signals and engine/vehicle operating parameters, the controller able to determine if the engine is in a cruising speed mode based on driver inputs and/or current engine operating conditions and/or current vehicle operating conditions, variable valve timing mechanisms for intake valves and exhaust valves to include variable cam timing or conventional camshaft arrangements, and controlling the intake and exhaust valve timing to reduce load disturbances. They, however, fail to disclose the specific methods of determining cruise operations.

Re claims 3 and 11, Buckland et al. teach a throttle position sensor 44 providing a feedback signal to controller 22 (column 3, lines 57-60), the determination of the engine/vehicle being in a cruise mode obviously depending on the activation and utilization of the throttle to one of ordinary skill in the art.

Re claims 4 and 5, Buckland et al. teach conventional camshaft arrangements for variable cam timing (column 4, lines 20-23), and it is well known to one of ordinary skill in the art that this includes crankshaft and/or camshaft position sensors which can be used for rotational and engine speeds.

Re claims 6, 12, and 13, Buckland et al. teach cruise control operations for maintaining constant speeds (column 2, line 33, column 5, lines 55-60, column 14, lines 16-23). It is obvious to one of ordinary skill in the art that maintaining a constant speed can be determined by calculating an average engine speed over time (steady state).

8. Claims 12 and 13 are further rejected under 35 U.S.C. 103(a) as being obvious over Mianzo et al.

Mianzo et al. disclose an internal combustion engine with a plurality of combustion chambers, associated intake and exhaust, intake valves and exhaust valves with respective ports,

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a variable valve timing arrangement controlled using electromagnetic actuators, an engine controller, a mass airflow sensor and engine speed sensor determining an operating condition of engine, the controller modifying the valve timing to control airflow, a speed control system controlled by controller to maintain the vehicle at a constant desired speed, the engine speed controller changing the valve timing based on engine speed, the speed control system permitting vehicle operation at a constant speed by varying valve timing. They, however, fail to disclose specifically calculating a steady state condition.

Mianzo et al. teach constant speed control operations through a speed control system and controller 12 receiving various signals such as a first and second measurement of vehicle speed (column 3, lines 59-63). It is obvious to one of ordinary skill in the art that maintaining a constant speed can be determined by using multiple measurements of vehicle speed and calculating an average engine speed over time (steady state).

Conclusion

9. The IDS (PTO-1449) filed on 19 November 2003 has been considered. An initialized copy is attached hereto.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of 3 patents.

- Ludlow (U.S. Patent 4,428,734) discloses planing-hull type boats and power drives compensating for variations in engine speeds.

- Tachibana et al. (U.S. Patent 6,336,432) disclose a valve timing control system using a learned speed control.

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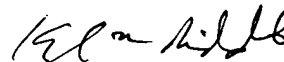
- Nanami (U.S. Patent 6,558,214) discloses an engine arrangement for small planing watercraft for transitional speed control.

Communication

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle M. Riddle whose telephone number is (571) 272-4864. The examiner can normally be reached on M-F (07:30-5:00) Second Friday Off.

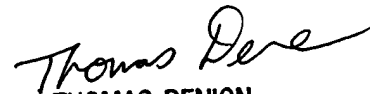
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kyle M. Riddle
Examiner
Art Unit 3748

kmr



THOMAS DENION
SUPERVISORY PATENT EXAMINER
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